ABSTRACT

[0063] A broadband/multiband circular array antenna is disclosed. One embodiment comprises a circular directional array antenna comprising a driven omnidirectional traveling-wave antenna element coupled to a transceiver via a feed and a plurality of surface-waveguide elements symmetrically positioned about and spaced from the driven omnidirectional traveling-wave antenna element. Each surface-waveguide element receives a control signal configured to selectively alter its waveguide characteristics to electronically direct a beam to/from the array. The array provides a directionally controllable antenna beam with broadband/multiband frequency performance in a low profile design that is both economical and practical to produce and maintain.